

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
30 August 2001 (30.08.2001)

PCT

(10) International Publication Number  
**WO 01/63883 A3**

(51) International Patent Classification<sup>7</sup>: **G06F 17/60**,  
H04M 11/00

(21) International Application Number: **PCT/US01/05677**

(22) International Filing Date: 23 February 2001 (23.02.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/185,053 25 February 2000 (25.02.2000) US  
Not furnished 23 February 2001 (23.02.2001) US

(71) Applicant: **TELECOMMUNICATION SYSTEMS, INC.** [US/US]; Suite 400, 275 West Street, Annapolis, MD 21401 (US).

(72) Inventors: **TITUS, Mark**; 396 Kiltie Court, Arnold, MD 21012 (US). **UNG, Dara**; 843 Snow Valley Lane, Odenton, MD 21113 (US). **JOHNSON, Carle, S., Jr.**; 1249 River Bay Road, Annapolis, MD 21401 (US). **WALLACE, Erik**; 1326 Swan Drive, Annapolis, MD 21401

(US). **GEIL, Phillip**; 6216 Lilac Bush Lane, Clarksville, MD 21029 (US). **HRONEK, Daniel, J.**; 1709 Woodlore Road, Annapolis, MD 21401 (US).

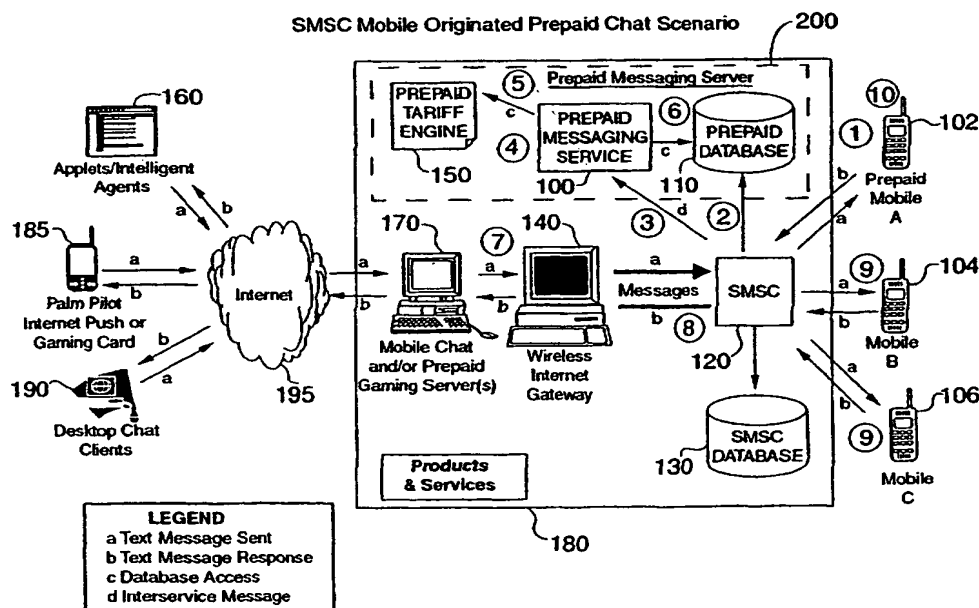
(74) Agent: **BOLLMAN, William, H.**; Manelli Denison & Selter PLLC, Suite 700, 2000 M Street, NW, Washington, DC 20036 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: **PREPAID SHORT MESSAGING**



(57) Abstract: A prepaid messaging solution that uses open networking standards and which supports pre-payment of enhanced Internet messaging services. The prepaid architectures and method accurately determine if a subscriber has sufficient account balance to deliver a complete short message, prior to delivery of the message. The short message may be prevented from being delivered if insufficient funds are in the subscriber's account. A prepaid tariff engine (150) is extensible over a TCP/IP network (195), and supports remote interaction with the SMSC (120) and web chat servers (170) for the purpose of applying a real-time billing charge for each message.



**Published:**

-- with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**(88) Date of publication of the international search report:**

14 March 2002

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US01/05677

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 17/60; H04M 11/00  
US CL : 705/39-45; 455/406, 408, 414, 445

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
U.S. : 705/39-45; 455/406, 408, 414, 445

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
EAST, DIALOG, DERWENT

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y.P	US 6,075,982 A (DONOVAN et al.) 13 June 2000 (13.06.2000), see entire document.	1-30
Y.E	US 6,195,543 B1 (GRANBERG) 27 February 2001 (27.02.2001), see entire document.	1-30
Y	US 5,974,133 A (FLEISCHER, III et al.) 26 October 1999 (26.10.1999), see entire document.	1-30

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

### \* Special categories of cited documents:

- A- document defining the general state of the art which is not considered to be of particular relevance
- E- earlier application or patent published on or after the international filing date
- L- document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- O- document referring to an oral disclosure, use, exhibition or other means
- P- document published prior to the international filing date but later than the priority date claimed

- T- later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- X- document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- Y- document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- &- document member of the same patent family

Date of the actual completion of the international search

12 August 2001 (12.08.2001)

Date of mailing of the international search report

07 SEP 2001

Name and mailing address of the ISA/US

Commissioner of Patents and Trademarks  
Box PCT  
Washington, D.C. 20231

Facsimile No. (703)305-3230

Authorized officer

Vincent Millin

Telephone No. (703) 305-3900